

**Cumulative Index of
“Science of Light”**

Volumes 17-22

**February
1974**

Published by

**The Institute for Optical Research
Kyōiku University (Tokyo University of Education)**

SCIENCE OF LIGHT

Board of Editors

Prof. Sei Hachisu	<i>Kyōiku University</i> (Chairman)
Prof. Hitoshi Kamata	<i>Tokyo University</i>
Prof. Kazuo P. Miyake	<i>Kyōiku University</i>
Prof. Ryumyo Onaka	<i>Kyōiku University</i>
Prof. Masao Seya	<i>Kyōiku University</i>
Prof. Ikuzo Tanaka	<i>Tokyo Institute of Technology</i>

Editorial Advisory Board

Prof. Yoshiro Fujioka	<i>Professor Emeritus, Kyōiku University</i>
Prof. Eiichi Minami	<i>Zyoti University (Sophia University)</i>
Dr. Haruo Ootuka	<i>President, Japan Documentation Society</i>
Prof. Sin-itiro Tomonaga	<i>Professor Emeritus, Kyōiku University</i>
Prof. Yoichi Uchida	<i>Professor Emeritus, Kyoto University</i>
Prof. Taku Uemura	<i>Professor Emeritus, Tokyo Institute of Technology</i>

Editorial Assistant

Ass. Prof. Akio Honma	<i>Institute for Optical Research, Kyōiku University</i>
-----------------------	--

All communications should be addressed to the editorial assistant.

Science of Light is distributed among:

- 1) The organizations related to optics and spectroscopy on the basis of exchange for their publications.
- 2) Exceptionally, the individuals or groups interested in our researches by editors' compliments.

The Institute for Optical Research

Kyōiku University (Tokyo University of Education)

22-17, Hyakunintyo-3, Shinjuku-ku, Tokyo.

160 Japan

Printed by

**Kabushiki Kaisha Kokusai Insatsu,
Tokyo**

Author Index

AKOBJANOFF, Lev

Iso-Phase Contours Structure of Refracted and Reflected Rays. Vol. 17 (1968) 106.

ARAI, Toshihiro

T. Arai, T. Ogawa, and K. Kudo: Some Properties of Silicon Oxide Films on Silicon Surfaces. Vol. 18 (1969) 75.

K. Kudo, T. Ogawa, and T. Arai: Specular Reflection of the Echelette Grating and Its Use as a Filter in the Far Infrared Region. Vol. 20 (1971) 45.

K. Takahashi, T. Arai, and K. Kudo: Optical Properties of SnSe and SnS. Vol. 21 (1972) 131.

BHATIA, K. S.

Y. N. Joshi, K. S. Bhatia and W. E. Jones: $3d^84sa^4F \rightarrow 3d^84pz^4(P^oD^oF^oG^o)$ Transitions in Ga V. Vol. 21 (1972) 113.

CHANG, Han-chuan

M. Ogawa and H. Chang: Absorption Spectrum of Electrically Excited Oxygen Molecules. Part II. Vol. 17 (1968) 45.

DUBEY, M. C.

P. R. Rao and M. C. Dubey: Diffraction by a Spherically Aberrated Circular Aperture with Partially Coherent Light. Vol. 20 (1971) 82.

FUJIEDA, Shuko

Optical Constants of the Sodium Tungsten Bronzes in the Visible Region. Vol. 18 (1969) 1.

FUJITA, Ikuo

I. Fujita, S. Yano and R. Onaka: Decay Time and Quantum Yield of Luminescence from α Centers. Vol. 17 (1968) 89.

FUKUDA, Jun-ichi

F. Masuda and J. Fukuda: Cylindrical Chopper Suitable for Use with Vacuum Monochromator. Vol. 19 (1970) 26.

Y. Sakayanagi and J. Fukuda: Multi-pass Michelson-type Interferometer. Vol. 21 (1972) 17.

FURUSAWA, Kunio

K. Furusawa and S. Hachisu: On the Distance Between the Particles in Schiller-Layers. Vol. 17 (1968) 1.

GEORGE, S.

Y. N. Joshi and S. George: Ionization Potential of Se IV. Vol. 19 (1970) 43.

HACHISU, Sei

K. Furusawa and S. Hachisu: On the Distance Between the Particles in Schiller-Layers. Vol. 17 (1968) 1.

S. Okamoto and S. Hachisu: A Reversible Agglomeration of Plate-like Gold Particles due to a Long Range Attractive Force-Tactoid Formation-Vol. 19 (1970) 49.

M. Ozaki and S. Hachisu: Photophoresis and Photo-agglomeration of Plate-like Silver Iodide Particles. Vol. 19 (1970) 59.

HAYAISHI, Tatsuji

T. Namioka, M. Seya and T. Hayaishi: Spectral Intensity Measurement in the Vacuum Ultraviolet Region. Vol. 17 (1968) 96.

HONMA, Akio

Energy Parameters of In^+ and Tl^+ Ions in KCl. Vol. 17 (1968) 34.

Asymmetry of the Triplet Structure of the C Absorption Band for the Tl^+ -Type Impurity in Alkali Halides. Vol. 18 (1969) 33.

Moments of Dichroic Spectra of (s)² Impurity Ions in Cubic Crystals. Vol. 21 (1972) 119.

Theory of Optical Absorption Spectra of Impurities in Solids. III Vol. 22 (1973) 1.

Theory of the $d^{10}s^2 \rightarrow d^{10}sp$ and $d^{10}s^2 \rightarrow d^9s^3p$ Optical Transitions of Impurities in Cubic Crystals. I. Singlet-Singlet Transitions Vol. 22 (1973) 101.

IGUCHI, Yasuo

Fine Structure of the Soft X-ray Absorption Bands of RbCl and RbBr Near the $Rb^+M_{IV,V}$ Edges. Vol. 19 (1970) 1.

ISHII, Keishi

Transition Probabilities for the $f-d$ Transitions of the Singly Ionized Neon and Argon. Vol. 20 (1971) 66.

ISHIKAWA, Tamotsu

A. Shimauchi, T. Ishikawa, and Y. Nishiyama: Variations of the Mode Intensity Spectrum of a He-Ne Laser in an Axial Magnetic Field. Vol. 19 (1970) 14.

IWATA, Hideharu

M. Shimauchi, H. Iwata, T. Matsuno, Y. Sakaba, S. K. Lee, and S. Karasawa: Spectrum of AsS III. Analysis of the $A'^2II - X^2II$ Band System. Vol. 21 (1972) 145.

JONES, W. E.

Y. N. Joshi, K. S. Bhatia and W. E. Jones: $3d^84sa^4F \rightarrow 3d^84pz^4(P^oD^oF^oG^o)$ Transitions in Ga V. Vol. 21 (1972) 113.

JOSHI, Y. N.

Y. N. Joshi and S. George: Ionization Potential of Se IV. Vol. 19 (1970) 43.

Y. N. Joshi, K. S. Bhatia and W. E. Jones: $3d^84sa^4F \rightarrow 3d^84pz^4(P^oD^oF^oG^o)$ Transitions in Ga V. Vol. 21 (1972) 113.

KAMIYA, Kōgo

M. Yoshida, K. Yoshihara and K. Kamiya: Holographic Production of Diffraction Gratings. Vol. 22 (1973) 146.

KARASAWA, Shiro

M. Shimauchi, H. Iwata, T. Matsuno, Y. Sakaba, S. K. Lee, and S. Karasawa: Spectrum of AsS III. Analysis of the $A'^2II - X^2II$ Band System. Vol. 21 (1972) 145.

M. Shimauchi and S. Karasawa: Spectrum of AsS IV. Reassignment of the $A'^2II_i - X^2II_r$ Band System as a Result of the Isotope Effect Study. Vol. 22 (1973) 127.

KATO, Riso

K. P. Miyake and R. Kato, H. Yamashita: A New Mounting of Soft X-ray Monochromator for Synchrotron Orbital Radiation. Vol. 18 (1969) 39.

KIKUCHI, Shin-ichi

M. Shimauchi, Y. Sakaba and S. Kikuchi: Spectrum of AsS. II. Further Analysis of the $A'^2II_{3/2} - X^2II_{3/2}$ Band System. Vol. 21 (1972) 1.

KUDO, Keiei

T. Arai, T. Ogawa and K. Kudo: Some Properties of Silicon Oxide Films on Silicon Surfaces. Vol. 18 (1969) 75.

K. Kudo, T. Ogawa, and T. Arai: Specular Reflection of the Echelette Grating and Its Use as a Filter in the Far Infrared Region. Vol. 20 (1971) 45.

K. Takahashi, T. Arai, and K. Kudo: Optical Properties of SnSe and SnS. Vol. 21 (1972) 131.

LEE, Siu Kong

M. Shimauchi, H. Iwata, T. Matsuno, Y. Sakaba, S. K. Lee, and S. Karasawa: Spectrum of AsS III. Analysis of the $A^2\Pi - X^2\Pi$ Band System. Vol. 21 (1972) 145.

MAGGO, J. N.

J. N. Maggo and K. Singh: Modulation of a General Triangular Wave Object by an Annular. Vol. 19 (1970) 73.

MAJUMDER, K.

M. Singh and K. Majumder: Cylindrical Gratings with Circular Grooves. Vol. 18 (1969) 57.

MASUDA, Fumio

F. Masuda and J. Fukuda: Cylindrical Chopper Suitable for Use with Vacuum Monochromator. Vol. 19 (1970) 26.

MATSUNO, Tamotsu

M. Shimauchi, H. Iwata, T. Matsuno, Y. Sakaba, S. K. Lee, and S. Karasawa: Spectrum of AsS III. Analysis of the $A^2\Pi - X^2\Pi$ Band System. Vol. 21 (1972) 145.

MIYAKE, Kazuo P.

K. P. Miyake and R. Kato, H. Yamashita: A New Mounting of Soft X-Ray Monochromator for Synchrotron Orbital Radiation. Vol. 18 (1969) 39.

MOCHIDA, Yoshihiro

Optical Properties of Stannous Selenide in the Fundamental Absorption Edge Region. Vol. 17 (1968) 57.

NAMIOKA, Takeshi

T. Sai, M. Seya and T. Namioka: On Beutler's Theory of the Concave Grating. Vol. 17 (1968) 11.

T. Namioka, M. Seya and T. Hayaishi: Spectral Intensity Measurement in the Vacuum Ultraviolet Region. Vol. 17 (1968) 96.

T. Namioka, H. Noda and M. Seya: Possibility of Using the Holographic Concave Grating in vacuum Monochromators. Vol. 22 (1973) 77.

NISHIYAMA, Yasuko

M. Shimauchi and Y. Nishiyama: The Emission Spectrum of the SbS Radical. Vol. 17 (1968) 76.

A. Shimauchi, T. Ishikawa, and Y. Nishiyama: Variations of the Mode Intensity Spectrum of a He-Ne Laser in an Axial Magnetic Field. Vol. 19 (1970) 14.

A. Shimauchi, Y. Nishiyama and M. Ohtsuka: Effects of Axial Magnetic Fields on the Mode Intensity Spectrum and the Total Output Power of a He-Ne Laser. Vol. 21 (1972) 22.

NODA, Hideyuki

T. Namioka, H. Noda and M. Seya: Possibility of Using the Holographic Concave Grating in Vacuum Monochromators. Vol. 22 (1973) 77.

OGAWA, Kunimitsu

A. Shimauchi and K. Ogawa: Temperature Dependence of the Br⁷⁹ Nuclear Quadrupole Resonance Frequency and the Low Frequency Raman Lines of Para-Dibromobenzene. Vol. 17 (1968) 25.

OGAWA, Masaru

M. Ogawa and H. Chang: Absorption Spectrum of Electrically Excited Oxygen Molecules. Part II. Vol. 17 (1968) 45.

OGAWA, Tsutomu

T. Arai, T. Ogawa and K. Kudo: Some Properties of Silicon Oxide Films on Silicon Surfaces. Vol. 18 (1969) 75.

K. Kudo, T. Ogawa and T. Arai: Specular Reflection of the Echelette Grating and Its Use as a Filter in the Far Infrared Region. Vol. 20 (1971) 45.

OHTA, Kimihiro

Infrared Absorption of Gold in Silicon Single Crystal. Vol. 22 (1973) 12.

OHTSUKA, Masahiro

A. Shimauchi, Y. Nishiyama and M. Ohtsuka: Effects of Axial Magnetic Fields on the Mode Intensity Spectrum and the Total Output Power of a He-Ne Laser. Vol. 21 (1972) 22.

OKAMOTO, Shukuko

S. Okamoto and S. Hachisu: A Reversible Agglomeration of Plate-like Gold Particles due to a Long Range Attractive Force Tactoid Formation. Vol. 19 (1970) 49.

ONAKA, Ryumyo

I. Fujita, S. Yano and R. Onaka: Decay Time and Quantum Yield of Luminescence from α Centers. Vol. 17 (1968) 89.

ONOMICHI, Mitsukazu

Lattice Dynamics of Calcite. Vol. 22 (1973) 47.

OZAKI, Masataka

M. Ozaki and S. Hachisu: Photophoresis and Photo-agglomeration of Plate-like Silver Iodide Particles. Vol. 19 (1970) 59.

PETRAKIEV, A.

A. Petrakiev and T. Vörös: Diagramms for the Application of the Fowler-Milne Method for Some He- and Xe-Lines. Vol. 18 (1969) 106.

RAO, P. R.

P. R. Rao and M. C. Dubey: Diffraction by a Spherically Aberrated Circular Aperture with Partially Coherent Light. Vol. 20 (1971) 82.

SAI, Tōkoku

T. Sai, M. Seya and T. Namioka: On Beutler's Theory of the Concave Grating. Vol. 17 (1968) 11.

SAITO, Hiroshi

Multiplet Exciton Bands of Alkali Halides in the Extreme Ultraviolet Region. Vol. 20 (1971) 1.

SAKABA, Yasuo

M. Shimauchi, Y. Sakaba and S. Kikuchi: Spectrum of AsA. II. Further Analysis of the $A'^2II_{3/2}-X^2II_{1/2}$ Band System. Vol. 21 (1972) 1.

M. Shimauchi, H. Iwata, T. Matsuno, Y. Sakaba, S. K. Lee, and S. Karasawa: Spectrum of AsS III. Analysis of the A'^2II-X^2II Band System. Vol. 21 (1972) 145.

SAKAYANAGI, Yoshimi

Y. Sakayanagi and J. Fukuda: Multi-pass Michelson-type Interferometer. Vol. 21 (1972) 17.

SEYA, Masao

T. Sai, M. Seya and T. Namioka: On Beutler's Theory of the Concave Grating. Vol. 17 (1968) 11.

T. Namioka, M. Seya and T. Hayaishi: Spectral Intensity Measurement in the Vacuum Ultraviolet Region. Vol. 17 (1968) 96.

T. Namioka, H. Noda and M. Seya: Possibility of Using the Holographic Concave Grating in Vacuum Monochromators. Vol. 22 (1973) 77.

SHIMAUCHI, Akira

A. Shimauchi and K. Ogawa: Temperature Dependence of the Br⁷⁹ Nuclear Quadrupole Resonance Frequency and the Low Frequency Raman Lines of Para-Dibromobenzene. Vol. 17 (1968) 25.

A. Shimauchi, T. Ishikawa, and Y. Nishiyama: Variations of the Mode Intensity Spectrum of a He-Ne Laser in an Axial Magnetic Field. Vol. 19 (1970) 14.

A. Shimauchi, Y. Nishiyama and M. Ohtsuka: Effects of Axial Magnetic Fields on the Mode Intensity Spectrum and the Total Output Power of a He-Ne Laser. Vol. 21 (1972) 22.

SHIMAUCHI, Midori

M. Shimauchi and Y. Nishiyama: The Emission Spectrum of the SbS Radical. Vol. 17 (1968) 76.

The Emission Spectra of the AsS and AsS⁺ Radicals. Vol. 18 (1969) 90.

M. Shimauchi, Y. Sakaba and S. Kikuchi: Spectrum of AsS. II. Further Analysis of the A'²II_{3/2}—X²II_{3/2} Band System. Vol. 21 (1972) 1.

M. Shimauchi, H. Iwata, T. Matsuno, Y. Sakaba, S. K. Lee, and S. Karasawa: Spectrum of AsS III. Analysis of the A'²II—X²II Band System. Vol. 21 (1972) 145.

M. Shimauchi and S. Karasawa: Spectrum of AsS IV. Reassignment of the A'²II_i—X²II_r Band System as a Result of the Isotope Effect Study. Vol. 22 (1973) 127.

SHIMIZU, Hiroyasu

Optical and Electrical Properties of Germanium Single Crystals Heavily Doped with Tin. Vol. 21 (1972) 53.

SINGH, K.

J. N. Maggo and K. Singh: Modulation of a General Triangular Wave Object by an Annular Aperture Suffering from Defect of Focus. Vol. 19 (1970) 73.

SINGH, Mahipal

M. Singh and K. Majumder: Cylindrical Gratings with Circular Grooves. Vol. 18 (1969) 57.

TAKAHASHI, Keishiro

K. Takahashi, T. Arai and K. Kudo: Optical Properties of SnSe and SnS. Vol. 21 (1972) 131.

VÖRÖS, T.

A. Petrakiev and T. Vörös: Diagramms for the Application of the Fowler-Milne Method for Some He- and Xe-Lines. Vol. 18 (1969) 106.

WEISSLER, G. L.

Closing Speech and Summary of the "Third International Conference on Vacuum Ultraviolet Radiation Physics". Vol. 20 (1971) 95.

Photoionization, a Survey of Methods of Measurements, Including Plasma Arc Spectroscopy. Vol. 21 (1972) 89.

YAMASHITA, Hiroshi

K. P. Miyake and R. Kato, H. Yamashita: A New Mounting of Soft X-Ray Monochromator for Synchrotron Orbital Radiation. Vol. 18 (1969) 39.

YAMASHITA, Takuro

Excitation of Aluminum and Copper Atoms in the Lewis-Rayleigh Nitrogen Afterglow. Vol. 21 (1972) 44.

Studies on the Lewis-Rayleigh Nitrogen Afterglow. Vol. 22 (1973) 112.

YANO, Susumu

I. Fujita, S. Yano and R. Onaka: Decay Time and Quantum Yield of Luminescence from α Centers. Vol. 17 (1968) 89.

YOSHIDA, Minoru

M. Yoshida, K. Yoshihara and K. Kamiya: Holographic Production of Diffraction Gratings. Vol. 22 (1973) 146.

YOSHIHARA, Kunio

M. Yoshida, Y. Yoshihara and K. Kamiya: Holographic Production of Diffraction Gratings. Vol. 22 (1973) 146.

Subject Index

Absorption

Energy Parameters of In^+ and Tl^+ Ions in KCl . Vol. 17 (1968) 34.

Absorption Spectrum of Electrically Excited Oxygen Molecules. Part II. Vol. 17 (1968) 45.

Optical Properties of Stannous Selenide in the Fundamental Absorption Edge Region. Vol. 17 (1968) 57.

Asymmetry of the Triplet Structure of the C Absorption Band for the Tl^{+-} Type Impurity in Alkali Halides. Vol. 18 (1969) 33.

Fine Structure of the Soft X-ray Absorption Bands of RbCl and RbBr Near the $\text{Rb}^+\text{M}_{\text{IV},\text{V}}$ Edges. Vol. 19 (1970) 1.

Multiplet Exciton Bands of Alkali Halides in the Extreme Ultraviolet Region. Vol. 20 (1971) 1.

Optical and Electrical Properties of Germanium Single Crystals Heavily Doped with Tin. Vol. 21 (1972) 53.

Moments of Dichroic Spectra of $(s)^2$ Impurity Ions in Cubic Crystals. Vol. 21 (1972) 119.

Optical Properties of SnSe and SnS . Vol. 21 (1972) 131.

Theory of Optical Absorption Spectra of Impurities in Solids. III. Vol. 22 (1973) 1.

Infrared Absorption of Gold in Silicon Single Crystal. Vol. 22 (1973) 12.

Theory of the $d^{10}s^2 \rightarrow d^{10}sp$ and $d^{10}s^2 \rightarrow d^9s^3p$ Optical Transitions of Impurities in Cubic Crystals. I. Singlet-Singlet Transitions. Vol. 22 (1973) 101.

Afterglow

Studies on the Lewis-Rayleigh Nitrogen Afterglow. Vol. 22 (1973) 112.

Alkali Halide

Energy Parameters of In^+ and Tl^+ Ions in KCl . Vol. 17 (1968) 34.

Decay Time and Quantum Yield of Luminescence from α Centers. Vol. 17 (1968) 89.

Asymmetry of the Triplet Structure of the C Absorption Band for the Tl^{+-} Type Impurity in Alkali Halides. Vol. 18 (1969) 33.

Fine Structure of the Soft X-ray Absorption Bands of RbCl and RbBr Near the Rb⁺M_{IV,V} Edges. Vol. 19 (1970) 1.

Multiplet Exciton Bands of Alkali Halides in the Extreme Ultraviolet Region. Vol. 20 (1971) 1.

Colloid Physics

On the Distance Between the Particles in Schiller-Layers. Vol. 17 (1968) 1.

A Reversible Agglomeration of Plate-like Gold Particles due to a Long Range Attractive Force.—Tactoid Formation— Vol. 19 (1970) 49.

Photophoresis and Photo-agglomeration of Plate-like Silver Iodide Particles. Vol. 19 (1970) 59.

Grating

On Beutler's Theory of the Concave Grating. Vol. 17 (1968) 11.

Spectral Intensity Measurement in the Vacuum Ultraviolet Region. Vol. 17 (1968) 96.

Cylindrical Grating with Circular Grooves. Vol. 18 (1969) 57.

Specular Reflection of the Echelette Grating and Its Use as a Filter in the Far Infrared Region. Vol. 20 (1971) 45.

Possibility of Using the Holographic Concave Grating in Vacuum Monochromators. Vol. 22 (1973) 77.

Holographic Production of Diffraction Gratings. Vol. 22 (1973) 146.

Impurity in Solid

Energy Parameters of In⁺ and Tl⁺ Ions in KCl. Vol. 17 (1968) 34.

Decay Time and Quantum Yield of Luminescence from α Centers. Vol. 17 (1968) 89.

Asymmetry of the Triplet Structure of the C Absorption Band for the Tl⁺-Type Impurity in Alkali Halides. Vol. 18 (1969) 33.

Optical and Electrical Properties of Germanium Single Crystals Heavily Doped with Tin. Vol. 21 (1972) 53.

Moments of Dichroic Spectra of (s)² Impurity Ions in Cubic Crystals. Vol. 21 (1972) 119.

Theory of Optical Absorption Spectra of Impurities in Solids. III. Vol. 22 (1973) 1.

Infrared Absorption of Gold in Silicon Single Crystal. Vol. 22 (1973) 12.

Theory of the $d^{10}s^2 \rightarrow d^{10}sp$ and $d^{10}s^2 \rightarrow d^9s^2p$ Optical Transitions of Impurities in Cubic Crystals. I. Singlet-Singlet Transitions. Vol. 22 (1973) 101.

Intensity Measurement

Spectral Intensity Measurement in the Vacuum Ultraviolet Region. Vol. 17 (1968) 96.

Interferometer

Multi-pass Michelson-type Interferometer. Vol. 21 (1972) 17.

Laser

Variations of the Mode Intensity Spectrum of a He-Ne Laser in an Axial Magnetic Field. Vol. 19 (1970) 14.

Effects of Axial Magnetic Fields on the Mode Intensity Spectrum and the Total Output Power of a He-Ne Laser. Vol. 21 (1972) 22.

Lattice Dynamics

Lattice Dynamics of Calcite. Vol. 22 (1973) 47.

Molecule

Absorption Spectrum of Electrically Excited Oxygen Molecules. Part II. Vol. 17 (1968) 45.

The Emission Spectrum of the SbS Radical. Vol. 17 (1968) 76.

The Emission Spectra of the AsS and AsS⁺ Radicals. Vol. 18 (1969) 90.

Spectrum of AsS. II. Further Analysis of the $A'^2\Pi_{3/2} - X^2\Pi_{3/2}$ Band System. Vol. 21 (1972) 1.

Spectrum of AsS III. Analysis of the $A'^2\Pi - X^2\Pi$ and System. Vol. 21 (1972) 145.

Spectrum of AsS IV. Reassignment of the $A'^2\Pi_t - X^2\Pi_r$ Band System as a Result of the Isotope Effect Study. Vol. 22 (1973) 127.

Monochrometer

A New Mounting of Soft X-Ray Monochromator for Synchrotron Orbital Radiation. Vol. 18 (1969) 39.

Cylindrical Chopper Suitable for Use with Vacuum Monochromator. Vol. 19 (1970) 26.

Possibility of Using the Holographic Concave Grating in Vacuum Monochromators. Vol. 22 (1973) 77.

Nuclear Quadrupole Resonance

Temperature Dependence of the Br⁷⁹ Nuclear Quadrupole Resonance Frequency and the Low Frequency Raman Lines of Para-Dibromobenzene. Vol. 17 (1968) 25.

Optical Constant

Optical Constants of the Sodium Tungsten Bronzes in the Visible Region. Vol. 18 (1969) 1.

Optics (General)

Iso-Phase Contours Structure of Refracted and Reflected Rays. Vol. 17 (1968) 106.

Modulation of a General Triangular Wave Object by an Annular Aperture Suffering from Defect of Focus. Vol. 19 (1970) 73.

Diffraction by a Spherically Aberrated Circular Aperture with Partially Coherent Light. Vol. 20 (1971) 82.

Semiconductor

Optical Properties of Stannous Selenide in the Fundamental Absorption Edge Region. Vol. 17 (1968) 57.

Some Properties of Silicon Oxide Films on Silicon Surfaces. Vol. 18 (1969) 75.

Optical and Electrical Properties of Germanium Single Crystals Heavily Doped with Tin. Vol. 21 (1972) 53.

Optical Properties of SnSe and SnS. Vol. 21 (1972) 131.

Infrared Absorption of Gold in Silicon Single Crystal. Vol. 22 (1973) 12.

Soft X-Ray

A New Mounting of Soft X-Ray Monochromator for Synchrotron Orbital Radiation. Vol. 18 (1969) 39.

Fine Structure of the Soft X-Ray Absorption Bands of RbCl and RbBr Near the Rb⁺M_{IV,V} Edges. Vol. 19 (1970) 1.

Spectroscopy

The Emission Spectrum of the SbS Radical. Vol. 17 (1968) 76.

The Emission Spectra of the AsS and AsS⁺ Radicals. Vol. 18 (1969) 90.

Diagramms for the Application of the Fowler-Milne Method for Some He- and Xe-Lines. Vol. 18 (1969) 106.

Ionization Potential of Se IV. Vol. 19 (1970) 43.

Transition Probabilities for the $f-d$ Transitions of the Singly Ionized Neon and Argon. Vol. 20 (1971) 66.

Spectrum of AsS. II. Further Analysis of the $A'^2II_{3/2}-X^2II_{3/2}$ Band System. Vol. 21 (1972) 1.

Excitation of Aluminum and Copper Atoms in the Lewis-Rayleigh Nitrogen Afterglow. Vol. 21 (1972) 44.

Photoionization, a Survey of Methods of Measurements, Including Plasma Arc Spectroscopy. Vol. 21 (1972) 89.

$3d^84s^24F \rightarrow 3d^84p^2(P^0D^0F^0G^0)$ Transitions in Ga V. Vol. 21 (1972) 113.

Spectrum of AsS III. Analysis of the A'^2II-X^2II Band System. Vol. 21 (1972) 145.

Spectrum of AsS IV. Reassignment of the $A'^2II_i-X^2II_r$ Band System as a Result of the Isotope Effect Study. Vol. 22 (1973) 127.

that's important, because it's the difference between the additional growth in the

value of the asset and the amount of cash you've invested in it. That's what

you're doing when you're calculating your rate of return.

Remember, you should never invest money in anything that you don't understand.

And you should never invest money in anything that you don't know how to evaluate.

And you should never invest money in anything that you don't know how to sell.

And you should never invest money in anything that you don't know how to buy.

And you should never invest money in anything that you don't know how to hold.

And you should never invest money in anything that you don't know how to keep.

And you should never invest money in anything that you don't know how to protect.

And you should never invest money in anything that you don't know how to diversify.

And you should never invest money in anything that you don't know how to manage.

And you should never invest money in anything that you don't know how to control.

And you should never invest money in anything that you don't know how to manage.

And you should never invest money in anything that you don't know how to control.

And you should never invest money in anything that you don't know how to manage.

And you should never invest money in anything that you don't know how to control.

And you should never invest money in anything that you don't know how to manage.

And you should never invest money in anything that you don't know how to control.

And you should never invest money in anything that you don't know how to manage.

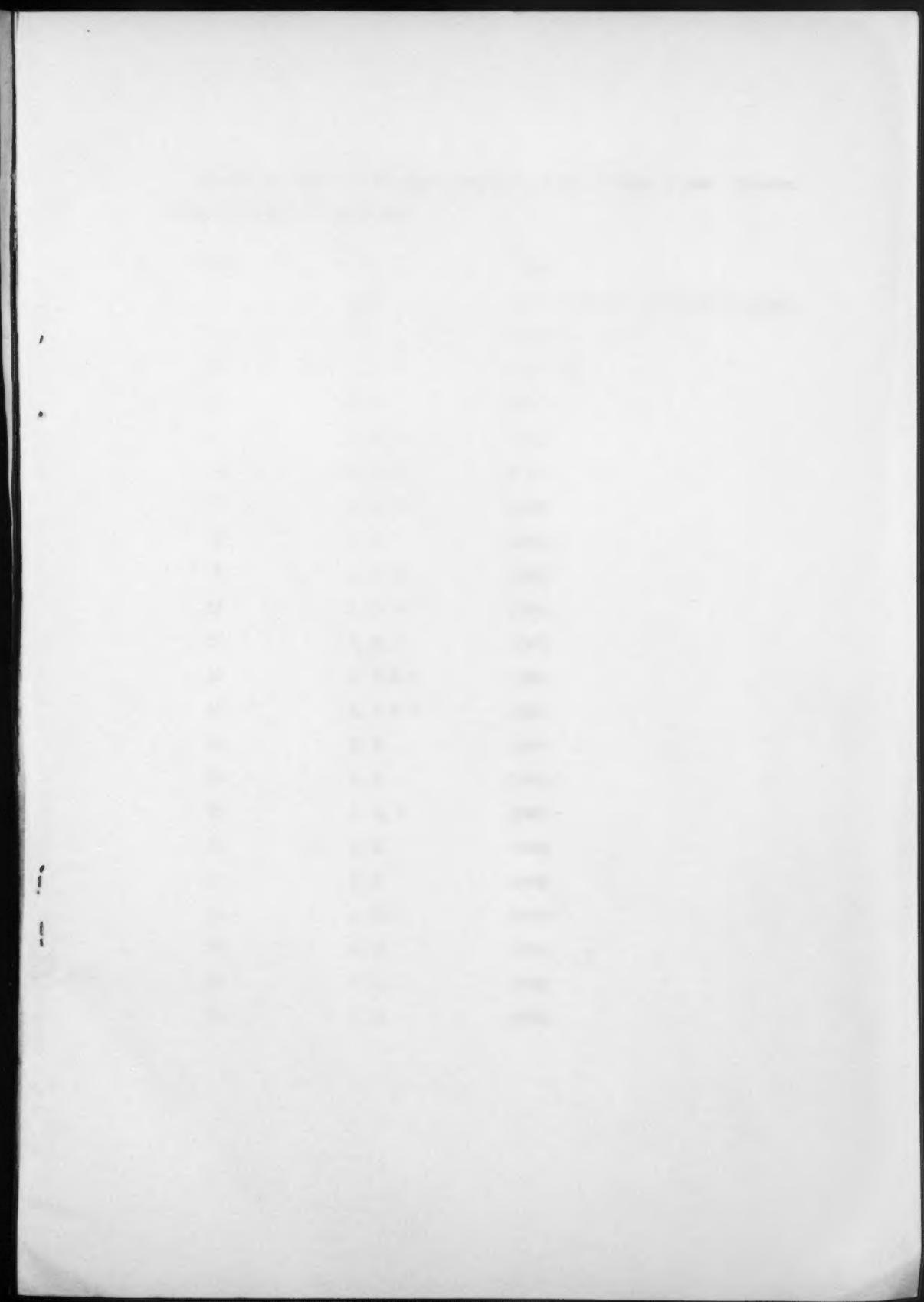
And you should never invest money in anything that you don't know how to control.

And you should never invest money in anything that you don't know how to manage.

And you should never invest money in anything that you don't know how to control.

And you should never invest money in anything that you don't know how to manage.

And you should never invest money in anything that you don't know how to control.





Science of Light is published irregularly 2 or 3 times a year. Volumes already published are as follows

Vol.	No.	Year
1	1, 2	(1951) (Japanese with English abstract)
2	1, 2	(1952-53)
3	1, 2	(1954-55)
4	1, 2	(1955)
5	1, 2, 3	(1956)
6	1, 2, 3	(1957)
7	1, 2, 3	(1958)
8	1, 2	(1959)
9	1, 2, 3	(1960)
10	1, 2, 3	(1961)
11	1, 2, 3	(1962)
12	1, 2 & 3	(1963)
13	1, 2 & 3	(1964)
14	1, 2	(1965)
15	1, 2	(1966)
16	1, 2, 3	(1967)
17	1, 2	(1968)
18	1, 2	(1969)
19	1, 2	(1970)
20	1, 2	(1971)
21	1, 2	(1972)
22	1, 2	(1973)



